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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHANG, RICHARD

ART UNIT

PAPER NUMBER

2616

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/935,238

Applicant(s)

SHARAN ET AL.

Examiner

Richard Chang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's arguments and amendments with respect to claims 1-54 have been fully considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent No. 6,031,841 ("Woundy") in view of US patent 6,510,162 ("Fijolek et al.") and further in view of US patent 6,785,564 B1 ("Quigley et al.").

Regarding claims 1 and 54, Woundy teaches a method and system for filtering messages communicated between a cable head end and one or more cable modems (MAC message management to support dynamic bandwidth/resource reservation over a broadband cable data network, See Fig. 1) comprising of

selecting message filtering criteria (using a filter spec by classifier) wherein the SID and filter spec are actually the key data or payload of a dynamic session message instead just a field on the header (See Fig. 1, Col. 1, lines 35-48),

receiving a message at the cable head end (intercepting path message at Cable Modem Termination System 202) from a cable modem or a message that is to be transmitted to a cable modem, and

when the received message meets the filtering criteria (filter spec by classifier), the Cable Modem receives the Dynamic Session Addition MAC message and stores (copying to a memory device the received message and the copied message including the new SID and filter spec at block 222 (as payload in this Dynamic Session Addition MAC message) (See Fig. 2, Col. 2, line 64 to Col. 3, line 34).

Woundy teaches substantially all the claimed invention but did not disclose expressly but only implicitly the limitation of "the received message may included payload".

Fijolek et al. teach a system and method for managing channel usage in a data over cable system wherein the Service Provider Descriptor (74 as payload) that defines the physical-layer characteristics plus MAC management header (72) (See Fig. 3, Col. 9, lines 53-66).

At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Fijolek et al. with Woundy in order to obtain a method and system for MAC message management and take advantage of including payload in the received message.

The motivation to do so would have been to include payload in the received message such as Service Provider that defines the physical-layer characteristics besides MAC management header, as suggested by Fijolek et al. in Col. 9, lines 53-66.

Woundy and by Fijolek et al. teach substantially all the claimed invention but did not disclose expressly but only implicitly the limitation of "copying the received message including at least payload and sending the copied message including at least payload to a memory device".

Quigley et al. teach a system and method for managing channel usage in a data over cable system wherein the received packets burst (payload + headers) is stored in FIFO until a complete packet is received then forwards (sends) the complete packets (See Fig. 3, Col. 6, lines 45-54).

At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Quigley et al. with Woundy and Fijolek et al. in order to obtain a method and system for MAC message management and take advantage of including receiving packets including payload and headers and storing in FIFO until a complete packet is received then forwarding (sends) the complete packets.

The motivation to do so would have been to use the store and forward FIFO technique to handle receiving data packets, as suggested by Quigley et al. in Col. 6, lines 45-54.

Regarding claims 21-22 and 42, Woundy further teaches that the message flow spec is processed in cooperation with the CMTS (202-226) upstream bandwidth scheduler, inherently there is at least a computer system and computer program instructions stored within the at least one computer readable product, the computer

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system comprising of one or more processors and one or more memory, wherein at least one of the processors and memory are adapted to operably filter messages communicated between a cable head end (202) and one or more cable modems (See Fig. 2, Col. 3, lines 10-21).

Regarding claims 2 and 23, Woundy further teaches that when the received message is to be transmitted to a cable modem, forwarding the received message to the cable modem (208), and when the received message is from a cable modem, processing the received message at the cable head end (206) (See Fig. 2, Col. 2, line 64 to Col. 3, line 34).

Regarding claim 4, 25 and 44, Woundy further teaches that wherein the message type is for bandwidth allocation, inherently a MAP type message (See Fig. 1, Col. 2, lines 8-23).

Regarding claim 3, 24 and 43, Woundy further teaches that wherein the filtering criteria specifies a message type and the received message meets the filtering criteria when the received message has the specified message type (218) (See Fig. 2, Col. 2, line 64 to Col. 3, line 34).

Regarding claim 5, 26, Woundy further teaches that the filtering criteria further specifies one or more service identifiers and the filtering criteria is met when the

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received message is a MAP message that contains any specified service identifier (See Col 1, lines 18-61).

Regarding claim 6 and 27, Woundy further teaches that the filtering criteria farther specifies one or more MAC addresses and the filtering criteria is met when the received message is a MAP message that contains any specified MAC address (See Col 1, line 64 to Col. 2, line 7).

Regarding claim 7, 28 and 45, Woundy further teaches that the filtering criteria further includes an option to append a time stamp to the copied message (See Fig. 1, Col. 1, line 18-32).

Regarding claim 8, 29 and 46, Woundy further teaches that the filtering criteria further includes an option to strip a MAC Management Header from the copied message (See Fig. 1, Col. 1, line 63 – Col. 2, line 9).

Regarding claim 9, 30 and 47, Woundy further teaches that the message type is a dynamic service message (See Fig. 1, Col. 1, lines 18-32).

Regarding claim 10, and 31, Woundy further teaches that the filtering criteria further specifies one or more service identifiers and the filtering criteria is met when the

received message is a dynamic service message that contains any specified service identifier (See Fig. 1, Col. 1, lines 18-61).

Regarding claim 11, and 32, Woundy further teaches that the filtering criteria further specifies a dynamic service message type and the filtering criteria is met when the received message is a dynamic service message that contains the specified dynamic service message type (See Fig. 1, Col. 1, lines 18-61).

Regarding claim 12, and 33, Woundy further teaches that the dynamic service message type is selected from a group consisting of a message for adding, a message for deleting, and a message for changing one or more services (See Fig. 1, Col. 1, line 63 – Col. 2, line 9).

Regarding claim 13, and 34, Woundy further teaches that the filtering criteria further include an option to append a time stamp to the copied message (See Fig. 1, Col. 1, line 18-61).

Regarding claim 14, and 35, Woundy further teaches that wherein the filtering criteria further includes an option to strip a MAC Management Header from the copied message (See Fig. 1, Col. 1, line 63 – Col. 2, line 9).

Regarding claim 15, 36 and 48, Woundy further teaches that the filtering criteria specifies one or more service identifiers and the filtering criteria is met when the received message contains any specified service identifier (See Fig. 1, Col. 1, line 18-61).

Regarding claim 16, 37 and 49, Woundy further teaches that the filtering criteria specifies one or more MAC addresses and the filtering criteria is met when the received message contains any specified MAC address (See Col 1, lines 18-61).

Regarding claim 17, 38 and 50, Woundy further teaches that the filtering criteria specifies one or more access control type parameters and the filtering criteria is met when the received message contains any specified access control type parameter (See Col 1, lines 18-61).

Regarding claim 18, 39 and 51, Woundy further teaches that the filtering criteria specifies either a downstream or downstream direction and the filtering criteria is met when the received message is associated with the specified direction (See Col 1, lines 18-61).

Regarding claim 19, 40 and 52, Woundy further teaches that the filtering criteria specifies one or more ports and the filtering criteria is met when the received message is associated with any specified port (See Col 1, lines 18-61).

Regarding Claims 20, 41 and 53, as discussed above, Woundy teaches substantially all the claimed invention but did not disclose expressly the particular application involving limitations of

"wherein the memory device forms part of a computer system that is accessible via a computer network".

Fijolek et al. teach a system and method for managing channel usage in a data over cable system wherein the server (25, memory device) forms part of a computer system that is accessible via a computer network (23) (See Fig. 5, Col. 12, lines 10-19).

At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Fijolek et al. with Woundy in order to obtain a method and system for MAC message management to support dynamic bandwidth/resource reservation over a broadband cable data network and to take advantage of having the server forms part of a computer system that is accessible via a computer network.

The motivation to do so would have been to have the server forms part of a computer system that is accessible via a computer network, as suggested by Fijolek et al. in Col. 12, lines 10-19.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Chang whose telephone number is (571) 272-3129. The examiner can normally be reached on Monday - Friday from 8 AM to 5 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RKC

rkc

Richard Chang
Patent Examiner
Art Unit 2616

Wing Chan
7/6/07
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SUPERVISORY PATENT EXAMINER